

## REMARKS

Claims 1-17 and 22-26 are pending

Claims 16, 17 and 22-24 are withdrawn.

Claims 1-15, 25 and 26 are rejected.

### Claim Rejections – 35 USC § 103

Claims 1-7 and 25-26 are rejected under 35 USC 103(a) as being unpatentable over U.S. Pub. No. 2002/0112119 to Halbert et al. (“Halbert”) and U.S. Pub. No. 2005/0005046 to Bashirullah et al. (“Bashirullah”). Claims 8-9 are rejected under 35 USC 103(a) as being unpatentable over Halbert and Bashirullah as applied to claim 5, and further in view of U.S. Pat. No. 5,5330,696 to Boggs, et al. (“Boggs”). Claim 10 is rejected under 35 USC 103(a) as being unpatentable over Halbert, Bashirullah and Boggs as applied to claim 8, and further in view of applicant’s admitted prior art (“AAPA”). Claims 11-12 are rejected under 35 USC 103(a) as being unpatentable over Halbert and Bashirullah as applied to claim 5, and further in view of Boggs. Claim 13 is rejected under 35 USC 103(a) as being unpatentable over Halbert, Bashirullah and Boggs as applied to claim 11, and further in view of AAPA. Claims 14-15 are rejected under 35 USC 103(a) as being unpatentable over Halbert, Bashirullah, Boggs and U.S. Pub. No. 2004/0056782 to Bliss et al. (“Bliss”).

With respect to claim 1, the Examiner argues that the “only possible disclosure of what the synchronization signals are is in claim 25.” However, the Examiner is referred to page 3, ll. 8-15, page 4, ll. 24-25, and page 5, ll. 7-10, and 11-16. For example, on page 5, ll. 7-16, synchronization signals are signals that are transmitted on a data path when they are needed, i.e. rather than blindly sending the signals regardless of data transition density. The Applicant respectfully requests that the Examiner interpret the claims in view of the specification.

The Examiner appears to be interpreting the synchronization signal and the data that resulted in the transitions in a FIFO of Bashirullah as the same thing. However, this interpretation contradicts the language “responsive to the achieved transition density” language of claim 1. That is, the transmission of the synchronization signal is what is responsive to the achieved transition density. In order for the transmission to be responsive to something, it must do something different depending on the state of something. Thus, whether the synchronization signal is transmitted must be dependent on the achieved transition density.

However, the only thing that is dependent on the achieved transition density is the bandwidth of the repeaters of Bashirullah, not the signal that passes through the repeaters. For example, if there are transitions in the data, that data propagates through the repeaters. If there are not transitions, i.e. the data is a constant 1 or 0 over multiple bits, the 1 or 0 over multiple bits still propagates through the repeater. See Figure 7 of Bashirullah showing that the constant state of a 1 or 0 is still transmitted. Thus, if the synchronization signal is the data, it is transmitted regardless of the transition density. Thus, the transmission is not responsive to the transition density.

Alternatively, the Examiner is interpreting a single data lane as both the lines with data [0..N] (i.e. Din[0..N], Dout[0..N], or the intervening lines with the data) and the control signal line. The Examiner is referred to the specification, page 3, ll. 23-34, page 4, ll. 16-18, and page 5, line 31 – page 6, line 3.

The Applicant respectfully requests that the Examiner provide documentation showing that under the broadest reasonable interpretation consistent with the specification as described in MPEP 2111, one skilled in the art would interpret a data lane as including a control signal line, particularly when “data lane” as used in the sections of the specification cited above is described as a subset of a multi-bit data path.

In claim 5, the synchronization signal is transmitted when the achieved transition density is less than the desired data transition density. Claim 14 includes similar elements. The Examiner is apparently interpreting the synchronization signal as a signal that causes at least one transition. In Bashirullah, as the Examiner notes, the threshold is one transition. If one transition is detected in the FIFO, the repeaters are switched to the current mode so that the transition is propagated over a link with a high bandwidth. However, if the transition density is less than one, i.e. zero, no transitions are transmitted. Thus, no synchronization signal is transmitted.

In other words, using the Examiner’s interpretation, no synchronization signal is transmitted when the achieved transition density is less than a desired data transition density, in direct contrast to the language of claims 5 and 14.

Note that if the threshold in Bashirullah is interpreted as greater than one for some reason, Bashirullah becomes unsatisfactory for its intended purpose. For example, if the threshold is two transitions during Cp clock cycles, yet only one transition occurs, that single transition is propagated through repeaters with the reduced bandwidth, distorting the signal.

Accordingly Bashirullah would not achieve its purpose of propagating high bandwidth data while conserving power by switching to a lower power voltage mode of operation when transitions are not propagating. That is, any modification of Bashirullah must not change the threshold to greater than one as it will render Bashirullah unsatisfactory for its intended purpose. The Examiner is referred to MPEP 2143.01 V. THE PROPOSED MODIFICATION CANNOT RENDER THE PRIOR ART UNSATISFACTORY FOR ITS INTENDED PURPOSE.

The addition of Boggs, the AAPA, and/or Bliss does not cure the deficiencies of the combination of Halbert and Bashirullah. For example, Boggs shows indicating a speed using a number of transitions, not transmitting a signal on a data lane. The AAPA only discusses NAND gates. Bliss focuses on coding to reduce media noise. Accordingly, the Applicant respectfully requests that the Examiner withdraw the rejection of claims 1, 5, 14, and dependent claims 2-4, 6-13, 15, 25, and 26.

### CONCLUSION

For the foregoing reasons, reconsideration and allowance of the pending claims of the application as amended is requested. The Examiner is encouraged to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

Respectfully submitted,

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